# ITEMS OF INTEREST.

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## Shots from the Profession.

### EFFECT OF PULPLESS TEETH WHEN LEFT IN THE JAW.

REMARKS IN THE ODONTOLOGICAL SOCIETY OF NEW YORK.

President Jarvie. During the last eighteen months a number of articles have been published in the *Medical Record*, by Dr. Samuel Sexton, of this city, on the effect of pulpless teeth when left in the jaws. These articles have attracted considerable attention among the members of our profession, and there is a most decided dissent on the part of many dentists from the conclusions arrived at by Dr. Sexton, though there may be some who agree with him. These articles have excited such interest that the Executive Committee of the Odontological Society have deemed it proper to make them the subject for discussion this evening.

D.. N. W. Kingsley introduced the subject by reading from the *Medical Record* of October 4, 1884, a report from the aural service of Samuel Sexton, M. D., entitled "Pain in the Ears caused by Irritation in the Jaws." Eight cases of otalgia were described and diagnosed as caused by the irritation of carious teeth. In reference to treatment it was believed that, "since dentistry had become such a popular business, and dead and diseased teeth had been so carefully retained in the jaws, through their influence, especially among the better class, nervous diseases about the head were becoming alarmingly common." He also read from the Medical Record an editorial on "Dead teeth in the Jaws," in which the editor says:

"Perhaps the time is near when medical men should be better informed concerning diseases of the jaw and mouth, rather than refer the ailments of this region to individuals whose limited knowledge of medicine does not prevent them from "treating" dead teeth long after their presence in the jaws has given rise to alveolar abscesses and neuralgias. It would not be strange if, in the course of events, the day would soon come when all teeth without pulps, and hence in process of decay, as well as those which the deposit of tartar, or other cause, had divested of periosteal nourishment, would be promptly condemned as unfit to remain in the jaw,—regarded, in fact, as foreign bodies liable to give rise not only to cerebral irritation and disease in the

organs of special sense, through the propagation of local disturbances in the mouth to the regions mentioned, but to endanger likewise the general health through purulent matter discharged into the mouth from alveolar abscesses, to be continuously swallowed for a long time, or, indeed, in some instances, to be absorbed and thus produce septiæmic poisoning. It is certainly gratifying to note the establishment of instruction in oral surgery in some of the medical schools, and it is to be hoped that this subject will receive the attention its importance demands."

Several replies to the foregoing were published in the *Medical Record*, which Dr. Kingsley read and then also read a communication from Dr. Sexton, in the same periodical for November 8, in which he says:

"Lest silence might be construed as yielding assent to your correspondents views, I beg space to reply briefly to some of their strictures. * * * The gist of the whole matter, however, seems to lie in the question, *Whether it is safe practiec to retain dead teeth in the jaws* * * * From a review of this subject we were further led to believe that in case of no dead (pulpless) tooth, however carefully treated and filled, can it ever be successfully demonstrated that a slight irritation is not constantly present though no appreciable irritation may be experienced by the patient.

"In regard to the treatment of pulpless teeth, the practice in vogue seems the reverse of procedures founded on one well-established surgical principle, since stopping the natural outlet for the escape of putrescent products from portions of the pulp left remaining in the canal and in the dental canaliculi, through the exterior part of the tooth itself, makes their passage into the tissues underneath unavoidable. The diversion of the drainage must be of questionable propriety in many instances, since the tissues about the roots of dead teeth are liable to become infiltrated with the products of decomposition, the absorption of which, when slowly formed, is much more liable to contaminate the system than the discharge of pus into the mouth from an alveolar abscess. Furthermore, inflammation of exposed dentine cannot surely be entirely arrested in any case by filling the pulp-cavity with any known extraneous material, and especially is handicraft wanting to even imperfectly protect the minute and often tortuous canals leading down to the apexes of the majority of teeth. The most skilful operator can, under these circumstances, at best but hope that his work will not soon be followed by trouble arising from the escape of deleterious matter into the tissues about the root, or the development of pericementitis. He is able only to offer a hopeful but uncertain prognosis in these cases, but the patient may remain an unconcious sufferer in respect to the slow but persistent irritation of the surrounding tissue; the irritation thus propagated from the dead tissues of the dentine will sooner or later most likely be transmitted through the tissues of the cementum to the periosteum. It is true that through the periosteum alone though the dentine may long derive some nourishment, yet in the meantime periostitis often exists. * * *

"That a defective tooth in many instances may remain in the jaw of a healthy person for an almost indefinite period without doing appreciable harm, surely does not warrant the risk being taken in a large number of cases, since what may be tolerated quite well in the strong and robust will set up serious trouble in those who are run down from any cause, in subjects of catarrhal and similar affections; in these the more an offending tooth is "treated," the worse in many cases it will be for the patient."

In the *Medical Record* of November 8 the following editorial article appeared:

*Dead Teeth in the Jaws*—It would be well if the dead (pulpless) teeth filled

and left in the jaws of people were labeled "at the owner's risk," and all golden "crowns" and "bridge" structures attached to dead teeth marked "extra hazardous;" for it appears that when the pulp of a tooth has been removed life no longer exists in the dentine, which derives its nourishment from the pulp, and there is no way of preventing the dead matter left in its canaliculi from undergoing decay for an indefinite period. * * * It would seem that dentistry has perhaps been over zealous in its efforts to retain defective teeth in the mouth, or supplant them with apparatus which often proves to be harmful for the patient. In carrying both of these branches of dentistry to what the medical mind regards as a dangerous extreme, the health of the patient has often been lost sight of. This, after all, naturally enough, was to be expected so long as medical men relegated the managemeut of nearly all diseases of the mouth, such as the removal of dead teeth, the treatment of alveolar abscesses, diseases of the antrum and facial neuralgias, to dentists who possessed very little if any knowledge of medicine. It is in consequence of this course that the treatment of jaw diseases has been lost sight of by the general surgeon, and we fear the well-intended efforts of dental schools to impart surgical knowledge to mere mechanics who constitute by far the greater number of their students will not remedy the neglected feature in medical education.

Dr. J. Morgan Howe remarked: We should congratulate ourselves and the medical profession that Dr. Sexton's observations and writings have awakened an interest in teeth and their conditions on the part of the medical profession. I think from this time the medical profession will take more serious cognizance of teeth as factors in reflex disturbances. The ear appears to be the most liable to be disturbed by dental irritation, but the eye does not escape. A year ago Mr. Henry Power, of London, read a paper before the Odontological Society of Great Britain, citing quite a number of cases in which diseases of the eye, both functional and organic, were shown to be produced by dental lesions. But the teeth as factors in reflex disturbances have too frequently escaped the attention of general and special practitioners in medicine. Only scattered references to teeth as disturbing elements are to be found in general works on surgery and medicine. In 1877 Dr. Burnett, and in 1879 Dr. Woakes, of England, in works on the ear, showed the effects of dental irritation on that organ; but dental authors have long ago recognized many reflex disturbances produced by teeth, affecting the ear, eye, uterus, and general muscular system; many such cases are recorded in the works of Garretson, Tomes, Salter and Wedl. But these disturbances are not altogether caused by dead teeth; exposed pulps, pulp stones, growths of secondary dentine, exostosis, or hypertrophy of the cement, and the process of dentition, are each capable of causing serious reflex disturbances.

Dr. Sexton, however, calls attention only to pulpless teeth, and his conclusions seem to be that they are not fit to remain in the jaw; that they are dangerous, and that dentists are imposing a risk in persuading the patient to retain them by treatment and filling; and the editor of the

*Record* says that such teeth should be labeled "at the owner's risk." The argument on which these conclusions are based is fallacious, because based on false premises. The death of the pulp and dentine do not of necessity interfere materially with the nutrition of the cement, because dentine and cement have their sources of nourishment from different directions, and the periosteum of the dental socket is not necessarily affected by the absence of the pulp. The cement may continue to be thoroughly well nourished through life, if irritation of septic matter in the pulp canal is prevented or arrested.

A successful refutation of Dr. Sexton's negative proposition would perhaps be difficult. He is "led to believe that in the case of no dead tooth, however carefully treated and filled, can it ever be successfully demonstrated that a slight irritation is not constantly present, though no appreciable irritation may be experienced by the patient;" but I can affirm that I have seen a great many dead teeth that had been filled by other dentists and by myself, both before and after inflammation and abscess, that have been useful for a number of years, and the patients could tell no difference between those dead teeth and the other teeth in their mouths. I do not doubt that others could give similar positive testimony. I have in my own mouth four dead teeth—three molars and a bicuspid. The roots of one of the molars have been filled for fifteen years, and since that time I have never known any difference between that tooth and any other tooth in my mouth; and that is also so with those filled more recently. Unfortunately I am not a specimen of physical robustness; yet none of these dead teeth have ever to my knowledge produced any reflex irritation. I do not suffer from neuralgia, nor earache, nor any such trouble, and I am fully convinced that my own experience is not an exception, but the rule, in cases of pulpless teeth properly treated and filled. I would call attention to one other point, which we have all observed,—that it is not an uncommon thing for old, pulpless roots, lying over on their sides, almost on top of the gum, to have the periosteum and cementum of the side that is attached so nearly normal in vitality and function that such old roots may remain firm and sometimes serve as grinders for years. I would express the opinion—and I am sure it will be seconded by some of you—that the unwise and indiscriminate capping of diseased or irritated pulps is a much more prolific cause of irritation, either local or reflex, than the proper treatment of dead teeth.

Those who treat dead teeth successfully do not in any respect reverse the procedures of old-established surgical principles, as Dr. Sexton seems to have been informed. Since he has been so unfortunate in his observations of the treatment of dead teeth, I must conclude that those whose operations have come to his notice have adopted a new

method of practice. No well-informed dentist thinks of "stopping the natural outlet for the escape of putrescent products." We do not fill the tooth, till all "putrescent products" are removed or rendered aseptic, and the abscess, if one has existed, is healed. After that drainage is no longer required, as Dr. Sexton knows. There are many, I am happy to say, who treat pulpless teeth with success; and medical men, if they had opportunity to observe the cases, would acknowledge it, I think. I have seen failures too. Roots which had been filled were a source of irritation. I have no doubt we have all seen such cases, but, in most all that have come under my observation and treatment, I have found, on investigation, that the lack of success was caused by imperfect root filling. I cannot claim superiority for myself in their treatment; I have seen so many cases, from the hands of so many good dentists, that the principles of treatment and the fact of success are well established. It is not to be wondered at, however, that medical men should entertain such erroneous impressions in regard to the relation of pulpless teeth to the surrounding tissues, for these extracts which have been read from the *Medical Record* shows a lack of accurate knowledge of dental anatomy and of the physiological relation of the tissues in and around the teeth; and it seems also that Dr. Sexton has seen some mistakes made by "dentists of repute," and, as extraction of the offending tooth resulted in cure, he has concluded that extraction is the only cure. But with increasing observation and knowledge the conclusion will be recognized as unwarranted. The present position of these medical men is a long step in advance, for the dangers incident to diseased teeth are recognized.—*Cosmos.*

**Extracting for Irregularities.**—The extraction of temporary teeth has more to do with the causing of irregularities than all other influences. The permanent central incisors are broader than the temporary. They crowd on the laterals, thereby expanding the arch. If, however, the temporary cuspids are extracted, leaving no room in the arch for the permanent cuspids, they will be erupted as tushes, and are often improperly extracted, thereby producing the characteristic deformity observed in persons who wear artificial dentures.—*T. W. Brophy.*

**In the Treatment of Irregularlties** we have to go back of any mechanical principle or instrumentality. The first thing to ascertain is: "What is the natural tendency in this mouth? Nature tends to regularity, and we must find the *obstruction* and remove it. Irregularity is a result of heredity. Notice whether the case is one of malposition of teeth or deformity of jaw. If the former it may be corrected by an appliance; if the latter, the prognosis is not so good. For instance, in a case of great protrusion of upper teeth, they may be in abnormal position in each jaw, and the deformity would be caused by the disproportionate size of the jaws.—*L. C. Ingersoll.*

## FOOD HABIT AS A FACTOR IN THE FORMATON OF TOOTH STRUCTURE.

C. N. PIERCE, D. D. S., PHILADELPHIA.

Let us take first, some illustrations from the invertebrata—animals without a back-bone. Their teeth are with few exceptions not dense, but shaped by food habit and jaw movement so as to be efficient in mastication. Commencing with the echinus, designated Aristotle's lantern, because first described by him, we find it has five teeth and five jaws, moved by thirty-five muscles. It subsists on shell-fish, and by the movement of these teeth, with sharp, cutting edges, it drills a hole in the shell of its prey and sucks out the juices. The echinus is an animal with primitive nervous organization, yet it has sense enough to have good taste, and by its liking for shell-fish does considerable injury to the business of the oysterman. This is one of the most complex arrangements of tooth-structure that is found in the animal economy.

Our next illustration we take from the common leech. We are all familiar with the manner in which this articulate makes its wound. The animal has three jaws, which are simple semi-circles, and are armed with teeth or denticles, not for mastication, but for cutting the flesh of its prey, and making a wound from which the animal draws the blood on which it lives. It shows the adaptation of teeth to the necessities of the animal. The jaws are attached to the second segment, and are so arranged as to make a tri-radiate wound. Among the intestinal worms, I may instance the tape-worm. You all know how difficult it is to dislodge this disgusting parasite from the alimentary canal. It has a circular mouth, armed with little hooks, which seize hold of the walls of the alimentary canal, and hold fast while the animal sucks the juices on which it subsists. In that way these hook-shaped teeth aid the animal in obtaining its nutrition.

Then we come to the mollusks, of which the varieties described may be numbered by the thousands. We may divide them into two classes, those with and those without heads. The headless have, of course, no teeth; while the food habits of some with heads are without the necessity for teeth, and hence they are edentulous. But in those which have teeth we find the variety in shapes corresponding with the difference in diet; so, as the little mollusk lives on vegetable, animal, or liquid food, the teeth quite as readily correspond to its necessities as do those of the vertebrate series to theirs. So in these, again, we have this selective influence of function, giving us structures in these plastic animals which are as fully adapted to their needs as are those enjoyed by the higher animals—*teeth modified in shape, substance, and arrangement by food habit.* The different materials on which the teeth are required to act and the different movements of the tissues in which

they are implanted tend to produce that peculiar shape and structure which are most efficient for nutrition.

Passing to the vertebrata, we have a large class of animals whose teeth we know have been either modified or wholly lost by reason of changed food habits. Birds to-day have no teeth, yet Professor Marsh, of Boston, has described some fossil birds which were furnished with well developed teeth like those of other vertebrates. There is an immense variety of fishes, which are placed by Professor Marsh in five great classes: the leptocardia, marsipobranchii, elasmobranchii, ganoidei and teleostei. The first of these, described by Haeckel as the acrania (without a skull), have no teeth, while the others have almost an endless variety. The marispobranchii, of which the lamprey are examples, having pointed, horny teeth. The elasmobranchii, embracing the rays, saw-fish, sharks, etc., have teeth with sharp points peculiarly adapted to their habits of life; and so on throughout the whole series, furnishing a greater variety of tooth-formation and attachment than any other class of animals.

Before leaving the fishes I want to direct your attention to the little toad-fish. We find the body covered with spines, and a similar one in each jaw, except that their location has given them a different function, and they have become modified by virtue of it. This is an illustration of the dermal origin of the teeth, and is equally well shown by a newly-hatched dog-fish, where at this age you can scarcely distinguish the spines located on the jaw from those on the dermal surface. These, becoming modified by function, soon present a different appearance.

Next we come to the reptilia. They have but few teeth. A poison-fang is remarkable for the peculiar arrangement for conducting the poison into the wound made by it. It would be much like taking an ordinary tooth, with the enamel and dentine on it, and rolling it out flat and doubling it on itself, the pulp cavity occupying its normal position. In folding it over we get a semi-canal connected with the sack of poison-fluid at the end of the root. The direction of the tooth is horizontal when at rest, but when elevated to pierce the prey, a membrane is drawn over this semi-tube so that it makes a complete canal, and as the animal strikes its prey the pressure on the sac at the root ejects the fluid through the canal into the wound made by the fang. Another peculiarity is that we have an endless succession of these fang-germs, so that when one is lost another is developed in its place. This is true of nearly all the fish series—where teeth are lost by violence or injured by wear, new teeth soon take their place.

We have the edentata or insectivorous animals, an ant-eater, which is deficient in front teeth. The molars it has are little round

pegs, made of dentine without enamel. The front teeth are deficient, yet in some of this group there is a lateral incisor, and in nearly all there are germs of both lateral and central incisors. They have not been developed for generations, yet the germs being present, represents the original idea and form of development, though it is aborted. Loss of function has greatly modified the teeth of this animal; the relegation to the tongue of the function of the incisors has made those teeth no longer necessary; hence they have disappeared, only the germs remaining to indicate the former type. The posterior teeth, having no hard substances to grind, have wholly lost their enamel; they are specialized for the services of the animal. This is not the true armadillo, though allied to that family.

As teeth are specialized by function and adapted to certain kinds of food, they are usually reduced in number; so, also, as we go up in the scale of intelligence from the lower to the higher, increased brain development seems to have a similar influence, the ancestral animal usually having had a greater number. Relegation of function brings diversion of nutrition.

Next in order comes a class of aquatic animals, which includes the sirena, or sea-cow, an herbivorous animal living in the water, and which is furnished with molars adapted to its diet. To this class of aquatic animals belongs also the spermaceti or sperm-whale, whose teeth are strong and cone-shaped, giving us the idea of prehensile use, and ranging in size in correspondence with location in the jaw, the heavier ones being located nearer the articulation. Its prey is seized and swallowed whole.

In the mysticetus, or right whale, balenoida (the largest mammal), we find a set of teeth in embryo, but they are functionless and absorbed before birth. At birth, in place of teeth are developed thin plates that run transversely across the jaw, some two hundred in number, and varying from ten to twenty feet in length. These great plates, which furnish the whalebone of commerce, are attached to the upper jaw, and form a sort of fringe on their lower edge, in which, as the animal swims through the water with open mouth, thousands of small, jelly-like animals become entangled. The water being expelled, these are transferred to the esophagus of the whale as its food. These plates are an adaptation of teeth specialized to the needs of the animal, and serve it in its nutritional demands.

In the quadrumana, embracing the lower monkeys and lemurs, we have teeth for crushing fruits—tubercular teeth, and very closely allied to those of the human family, but somewhat different in form, and in some, greater in number, the cuspids being more prominent and serving the males for weapons in combat.

Then we come to the anthropoidea, a group that embraces man as well as the higher apes. This group has teeth alike, except in the prominence of the cuspids; but in this ascent in the scale toward man we lose some of the teeth, the lemurs and lower monkeys having thirty-six, while the anthropoidea have but thirty-two. And it is a question worthy of consideration whether the frequent absence of the third molar in the human family is not in the same line of reduction; absence of function sending the nutritive current to other localities.

## DENTIST VS. PHYSICIAN.

Will you please tell us through the ITEMS OF INTEREST when the province of the Dentist stops, and that of the Physician begins? You know our dental diplomas confer on us "the rights and privileges" belonging to our specialty.—You also know there is a State law making it a penal offence for any one without a *medical* diploma, to "practice Medicine or Surgery" anywhere in this commonwealth. The limit bounding the sphere of the dental practitioner seems to be somewhat obscure. We have the rights of the "Doctor of Dental Surgery." Does that include the "doctor of dental medicine?" the "doctor of *oral* medicine?" the doctor of *systemic* medicine? Cases occur wherein mouth-troubles may be controlled readily by the administration of a little systemic or physical medicine. Have we, under the bungling arrangement of our laws, the legal right to treat our patients according to the full capacity of our skill? If not, then the dental degree should be *extended* to include medicine. If we have the right to so treat our patients, then the medical law should have a proviso inserted in it allowing dentists to "practice *Medicine* and Surgery." Laws that tie the hands of a person while he is holding therein the life, health and happiness of another, should be made with some judgment and forethought. There must have been few dentists in the Legislature when the medical laws of '75 and '81 were passed.

G. W. ADAMS, D. D. S., BRISTOL, PA.

### EDITORIAL REMARKS.

The degree of Dental Surgery, we should say, carries with it the practice of medicine so far as it is applicable to dental surgery; A man devoting himself to general surgery is not supposed to exclude himself from the administration of medicine so far as this promotes his success in his specialty. So with the obstetrician, ophthalmologist and other surgical specialists. The right of the surgeon in either of these departments, carries with it the right to use all medicines required to further his means.

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The ITEMS has given us the best method of preparing wax in sheets; now let's have the best thing to put in wax for base-plates, to make it tough.—*D. D. L.*

## SUCTION CAVITIES FOR PLATES.

DR. L. P. HASKELL, CHICAGO.

I desire to recall a little of the history of atmospheric pressure plates. In 1844 Dr. M. P. Hanson, then practicing in Salem, Mass., conceived the idea of dispensing with spiral springs, then universally used in retaining full dentures, by the use of atmospheric pressure. His first attempt proved a complete success. Having swaged a plate to the mouth without any air chamber, it adhered so strongly he could scarcely detach it. To test it fully he fastened a wire to the center, and attached a common water pail full of water, which the patient at once lifted from the floor and held suspended. He was, of course, delighted, and called some of his dental friends to witness the result.

A few years afterward the "suction cavity" was introduced by a Dr. Gilbert, and generally adopted, why, I am not able to tell, for after using it myself for some years, I long since abandoned it, except in rare instances. All that is necessary is to raise the plate slightly over the hard palate, by scraping the impression, or by a thin film of wax on the cast, in order to prevent its rocking, from settling of the alveolar.

I find it necessary to make but little change in the plaster cast; always, however, scraping a little from the posterior where the margin of the plate would rest, except in the center, as the plate will always bear sufficiently at that point.

My test of adhesion is simply to press the plate firmly to the palate. There is no necessity for the powerful suction some aim to secure.

In mouths where the tissues are like a mass of jelly, no hard portions, except, possibly, in the center, there will always be difficulty, not in securing suction, but in steadiness of plate, in biting, as there is nothing for it to rest against. In such cases everything depends on the *antagonizing*.

Throwing forward of plates, in some mouths, is owing to mobility of structure and deficiency of maxilliary tuberosity; or, in some cases, to improper antagonizing. Too often there is not sufficient care taken in antagonizing. Many otherwise perfect sets are thus rendered very troublesome and sometimes useless.

There should be left a good space between the upper and lower front teeth, and even then, in the course of time, they are apt to interfere, and throw the plate off. And, very often, the last molars are left too long, crowding the lower plate into the flesh, and displacing both. Teeth a trifle longer one side than the other will make trouble. Too much pains cannot be taken to obtain exact articulation.

I use Holbrook's method on the lower jaw, on a narrow ridge to relieve pressure, on a wide one, for suction. Do not leave the lower plate *too wide*.

## COCAINE USED HYPODERMICALLY.

There have been varying degrees of success and failure reported; and a singular fact is this: With a solution of the same salt, where two men have used it out of the same bottle, one will go into the highest state of exultation over his successes, while in equal careful hands, perhaps, his fellow practitioner will meet with utter failure, and abandons it. Having tried to be faithful in using the agent by instillation (dropping it on the tissues, or saturating them with it), I shall have to report failure, with but a single exception. The mode resorted to has been as follows, when applied to sensitive teeth: The cavities of decay have been carefully dried,—being protected by the rubber-dam,—and a solution of the salt varying in strength from a four to ten per cent. solution has been put in the cavity. After a lapse from three to six minutes this was repeated. In some instances I have called into requisition the hot-air syringe. In only one case has there been any appreciable loss of sensation, except where the heat of the syringe was continued, and the dentine so thoroughly dried as to check the circulation through the tubuli. I have tried no less than thirty cases, by instillation, in the mouths of as many persons, without any apparent diminution of pain. The hard character of the dentine seems to prevent the absorption of a sufficient amount of the agent to produce anesthesia. It seems, therefore to follow, that, instead of going from periphery to center, you can only get local anesthesia of the teeth with the drug by going from center to periphery. This can only be accomplished by hypodermic injection. By bringing the agent in contact with the nerve trunk, you will get partial if not total insensibility throughout its ramifications.

This brings to me the citation of cases of successful practical experiment, which demonstrates this fact. Early in December, while attending Dr. John M. Woodbury, of this city, professionally, the subject of cocaine was mentioned. He imformed me he and several of his friends had used it in minor surgical operations by injecting it on the nerve supplying sensation to the part to be operated on. As he had a very sensitive cavity in a molar to be filled, I suggested the idea of the adjacent tissue being injected with the cocaine, so that we might test the drug and its effects on the tooth. He willingly assented. We accordingly went to the office of his friend, Dr. Halsted, who injected the drug with the following result:

Case I. Dr. W.; cavity on the posterior surface of the right lower first molar; excessive sensibility on touching it. Caries had not caused much loss of the dentine covering the pulp. That organ was well protected and in a normal condition. The syringe was charged with thirteen minims of a four per cent. solution of cocaine, and the

needle-point directed on a line extending about midway between the angle and the coronoid process of the inferior maxillary, passing through the internal petergoid muscle. The finger being placed on the internal oblique line as a guide, the syringe-needle was carried along the inner surface of the ramus till it reached the nerve as it enters the inferior dental foramen. A "tingling" sensation was produced in the bicuspids and incisors when the syringe was discharged. In three minutes the tongue began to feel thick and numb on the right side. In seven minutes there was almost complete anesthesia of the right half of the tongue and the gums around the lower teeth. The excavator being applied to the cavity which was previously so tender, no sensation whatever was felt by the patient. I then used the engine with perfect freedom, and prepared the cavity for filling, without any discomfort to him. Though there was a slight degree of sensibility in the bottom of the cavity, he said it amounted to nothing comparatively; he was only conscious the instrument was there. The gustatory nerve, which lies near the inferior dental at the point injected, accounts for the tongue being anesthetized. As the gustatory was not touched, this shows it is not necessary for the needle to penetrate the nerve-substance. The cervical portion of the cuspid on the left side was very painful to touch, owing to denudation of the soft tissues that covered it; but, while operating on the side injected, the cuspid, though being in the same condition as the other, could be rubbed with a steel instrument without the slightest manifestation of pain. The anesthesia lasted for about twenty-eight minutes, when normal sensibility returned. That evening at dinner there was some stiffness and a slight soreness in the muscles while masticating on the right side. The next morning there were no symptoms indicating he had submitted to any unusual treatment.

Case II. Miss C., aged seventeen. The left upper central was decayed on the anterior proximal surface. There was excessive sensibility to the touch. The syringe was charged with ten minims of a four per cent. solution of cocaine, and the point of the needle carried under the upper lip on a line nearly parallel with and a little to the right of the cuspid eminence, keeping it near the body of the bone till the superior maxillary nerve was touched where it emerges from the infra-orbital foramen. As the point of the needle came in contact with the nerve a pricking sensation was experienced in the lip and front teeth on the left side. The drug being carefully injected and the needle withdrawn, I waited for results. At the end of two minutes she exclaimed, "Oh what a funny feeling in my nose!" In three minutes I pinched the left nostril with small pliers and pricked it on the inside with a sharp point, and it was as unfeeling as a piece of leather.

The lip was also without sensation. Touching the cavity in the bottom of the central, it was quite painful. In five minutes I put the excavator into the cavity again, and there were some sensation, but it was scarcely perceptible. This remained so till the excavating had been finished,—the anesthesia in the tooth not being complete at any time. Cold water thrown into the cavity was slightly felt. She said the pain in the tooth amounted to nothing, and that she would like to have the operation with the cocaine repeated in the treatment of another tooth. In twenty-seven minutes sensation began to return to the parts, and in thirty-five minutes normal sensibility seemed completely restored. There was slight soreness in the cheek the next morning. but it was only noticeable when touched.

Case III. Mr. D., aged twenty-seven; cavity in the grinding surface of the right upper third molar. Injected with thirteen minims of a four per cent solution on the nerve where it emerges from the infra-orbital foramen, as described in Case II. All the symptoms were experienced as in that case, the parts receiving filaments from the divisions of the superior maxillary nerve being similarly affected, while the cavity in the molar remained as sensitive as before injecting the cocaine. It was obvious that the posterior dental nerve had not been affected.

Case IV. Mrs. R. exceedingly nervous temperament. Cervical cavity in the left first lower bicuspid. There being a gutta-percha filling in the buccal surface of the second molar, and remembering it was one of the most sensitive cavities I ever filled (it was filled a year previous), in order to make a thorough test of the efficacy of the drug this filling was removed and the cavity found to be as sensitive as ever. I made a ten per cent solution, using ten minims of boiled water to one grain of the alkaloid, and charged the syringe with five minims of the solution. This made just one half a grain of the hydrochlorate, and the strength being greater, it reduced the amount to be absorbed. The point of the syringe-needle was carried to the inferior dental foramen, as before described. During this part of the operation at no time did the patient complain of being hurt,—it was *only* disagreeable. At the end of three minutes she facetiously remarked, "I am afraid I have lost the use of my tongue." In ten minutes I had a sharp bur removing carious dentine from the bicuspid; also deepened the undercuts and applied it freely to the molar. There was no pain further than the consciousness of the instrument's presence. Cold water being thrown into the cavities, no pain was produced. At the end of forty minutes, when "stopping" the cavities, the molar was very sensitive and the bicuspid disagreeably so. They were left open to test the return of normal sensation, the patient kindly consenting.

Case V. Miss F. A large cavity in the first upper right molar. The pulp was slightly exposed and congested. The tooth had "ached" for a week. Opening carefully into the pulp cavity, and getting rid of the effused blood, I made an application of an eight per cent. solution to the freely exposed pulp. After five minutes it was touched and found to be sensitive. Another application was made. After waiting three minutes more I was enabled to remove a little of the "body." With the hypodermic I injected two minims into the palatine root.—carrying the needle along the side of the root canal for about one-third its length. At the end of twenty minutes from the time of the first application, the pulp was entirely removed, with only a slight degree of pain, and the roots and cavity filled temporarily. The patient said the pain "was very slight indeed." She seemed delighted at being relieved from the "ache" so easily and rapidly.

Case VI. Mr. B. The gentleman presented himself with pain in the face; second left lower molar dead, with fistulous opening on the gum opposite the posterior root. Pulp cavity and roots had been filled. The sinus was quite small, and very sore when touched with an instrument inside. Desiring to open freely, so as to facilitate the treatment of the tooth at the point where the trouble originated, I used a small pointed syringe and injected five minims of a four per cent solution of cocaine, passing it with great care into the sinus for about two-thirds its length. In five minutes I made a free opening without pain to the patient.

Before removing the salivary calculus from the teeth, by taking a small piece of absorbent cotton, saturating it with the cocaine and passing it round the necks of the teeth, the disagreeable, though not very painful, sensation produced by the point of the instrument will be greatly relieved. Wait three or four minutes after its application before operating. Either a four or eight per cent solution will answer for this purpose, though I am using the ten per cent for all purposes, believing it to be more efficacious. Several experiments have been made by injecting the cocaine on the nerve as it emerges from the mental foramen, the result being that the teeth from the second bicuspid to the medium line were rendered insensible.

The cases reported are only a few of those operated on, but are sufficient to demonstrate the method of using the drug and its effects. —*Cosmos.*

## WHO ARE QUACKS?

I think it worth the time and trouble to answer Observer in the January ITEMS OF INTEREST on Quacks. There seems to be erroneous opinions held by opposers to quacks, that they are not *one* of them because *they* do not advertise. I venture to advance the assertion that

there is not one of these self-asserting gentlemen but have their own peculiar method of advertising, which is *no less so* because carried on under the cloak of the church, societies, colleges, fine offices, good clothes, or other ways too numerous to mention.

Now "Observer," till you become a nonentity, through a failure to advertise in any manner, don't proscribe others. As non-advertising is no test of ability, take more care you do not try to make it so by your self-assumed show of dignified reserve. ONE OF THEM.

## NO TEETH.

H. E. VAN HORNE, SYRACUSE, N. Y.

Editor ITEMS OF INTEREST:—I have this day seen an interesting case; a lad of 15 years without any superior lateral incisors and without any indication of germs undeveloped. He certainly never lost them by accident or extraction. His father tells me that neither he himself, nor brother had these laterals, and that their father had his lateral incisors extracted when quite young, to make room for the canines. The boy's lower teeth are all in correct position. Is this not proof, that we have labored toward deformity of future generations in trying to remedy present irregularity by extraction? It is wrong, and every effort should be made to discourage the practice. Regulate by expanding the jaws. This is the only true way to repair damages already staring us in the face.

We have received from the WELCH DENTAL COMPANY of Philadelphia, a copy of a little book entitled—"Letters from a Mother to a Mother on Children's Teeth." It contains a history of the gradual development of the teeth from the earliest period of life; with practical advice as to the diet and care of health of both mothers and their children, especially as affecting the teeth.

A medical friend, to whose examination the work was submitted, gives a very favorable report of the good character, and probable usefulness of the book. The only exception he made was, that the author, in speaking of the impress left on the teeth by disease, before their appearance through the gums, after mentioning that even the brief indisposition caused by vaccination leaves its mark on the teeth-germs, suggests that on this account it might be best to postpone vaccination till after the teeth are all developed. My friend thought the risk to the unvaccinated child of taking small-pox more than counter-balanced the very slight injury which could accrue to the teeth from this source.

Making allowance for the natural tendency to give great prominence to things in which we are much interested; we think mothers and those having the care of young children, will find in this book many hints that are valuable, and that may be useful to them, not only in caring for the teeth of the little people, but in training them so as to be healthy men and women.—*The Friend.*

## IS COCAINE A POISON?

The use of all kinds of anesthetics is becoming dangerously general. The latest and perhaps the most powerful is cocaine. All other anesthetics pale before the intense power of this drug to relieve pain. Very little is yet known of it and it should never be taken unless under the immediate supervision of a skilful physician.

A late copy of the American Analyst, published in New York, gives an interesting account of the fatal effects of cocaine.

The Analyst in reporting the case of poisoning by cocaine, says:

That such is the case was demonstrated at a meeting of the Medico-Legal Society, New York City, on the evening of November 18th, when Professor R. Ogden Doremus read a letter from Dr. F. M. Thomas, of Kansas City, in which was related the case of a woman who died after applying a small amount of hydrochlorate of cocaine, four per cent solution, to her gums to cure toothache. She vomited violently, her right arm and both legs lost power of action, her face was contorted, the right pupil dilated, and the left hand gripped convulsively at the bed clothes. Her pulse ran down to thirty-five beats, and despite all efforts to save her she died in three hours. The bottle containing what was left of the cocaine which the woman had used was sent to Professor Doremus for analysis, and to determine if it was really the cause of the woman's death. Citing some reports of French physicians in reference to the action of cocaine on the human system, the professor concluded from all the evidence, that it was a case of fatal poisoning from cocaine. He admitted, however, that it was difficult to understand how so small an amount of the drug as appeared to have been taken out of the bottle could have produced such a deadly effect. At the conclusion of Prof. Doremus' comments on the case several physicians present gave their opinions of cocaine. Dr. W. F. Holcomb narrated his experience with its use and declared it to be his opinion that the drug is a poison, and that it should be sold only on a physician's prescription. Dr. Bolden related several experiments he had made with it on a dog and a cat, and expressed the full belief that the Kansas City case was one of cocaine poisoning. He said little is known of its properties, and that restrictions should be placed on its use. This we believe is the first instance—at least the first one made public—in which human life has been lost through the external application of cocaine. It shows conclusively the necessity of exercising the greatest caution in its use, the first step toward which should be the restricting its sale to persons presenting physicians' prescriptions at the drug store; and the second should be, till its action becomes better known, to leave its handling and application wholly to the doctor who recommends its administration.

Dr. Doremus, of New York, states that the cocaine habit is surely superceding the morphine habit among the fashionable anesthetic inebriates. The cocaine is preferred because of its more direct effect.

[We think, if the poisoning effect of cocaine has to rest on this case, it has a slender foundation. Its administration, as in this case, is constant throughout christendom without apparent deleterious results. —Ed. ITEMS.]

## CORROSIVE SUBLIMATE AS A SURGICAL DRESSING.

While we are all familiar with the fact that the bichloride of mercury is a most valuable disinfectant, yet we doubt whether its full power is realized, and whether it holds that high place in the estimation of surgeons to which its efficacy entitles it.

Considering it as one of the most valuable aids to the surgeon, we think all should be familiar with its merits. In one of our hospitals in this city, solutions, varying from 1 to 1,000 to 1 to 5,000 are kept constantly on hand, and when cases of bruised and lacerated limbs are brought in, they are at once enveloped in these solutions, and the results are truly remarkable. One case is so striking as to merit special note:

A small child was brought in with his leg so mangled (bones comminuted, etc.) that the whole surgical staff (three prominent surgeons) decided that amputation was imperative. To this the parents so strongly objected that the surgeons were forced to yield. Explaining to the parents the almost certainty that the child would die, and placing the responsibility where it rightly belonged, the limb was incased in bichloride sawdust. Presto! result, an absolutely perfect limb.

Many such cases could be cited, but suffice it is to say that by the use of corrosive sublimate we can save many limbs that otherwise would be sacrificed.

In this connection, it will be well to note that Dr. R. J. Levis has great faith in the potassio-murcuric iodide. He has tablets prepared of such strength that one dissolved in a pint of water gives him a $\frac{1}{12000}$ solution, which with hydronaphthol constitutes his antiseptic armamentarium.—*Med. and Surg. Reporter.*

**Advertising Dentists.**—Ed. ITEMS:—I read with much pleasure and profit the last two volumns of the ITEMS OF INTEREST. But I object to the advertising dentist being put down and out by the unfair method of the force of what you may consider a superiority of numbers. Any fair-minded dentist will admit, at least to himself, the truth of my position, and the time is close at hand when he will not hesitate to admit it in public. Let others be heard from. Yours respectfully,

GEO. B. SANFORD.

## SOME CRITICISMS.

DR. GARRETT NEWKIRK, CHICAGO.

### DECAY OF TEETH DURING PREGNANCY.

In the ITEMS for January, Dr. Dwinelle, says: "During a long practice I have observed that some patients lose more teeth in a single period of gestation than they have lost during the whole of their lives previous to that period, and I know beyond all controversy that they have lost them through the agency of the acridity of the secretions of the mouth and general system—a system which has been vitiated, and necessarily so, *for it seems to be the order of nature that during the months of gestation the majority of women have acid secretions of the stomach, and of the mouth, and an acid condition of the system generally.*"

I object to the phrases "necessarily so," and "order of nature," in this connection. In my opinion they do not express the truth. If it is the "order of nature" that the secretions generally shall be vitiated and destructive in pregnancy, then is pregnancy disease. Such an "order" can apply only to exceptional, and for the most part, badly managed cases. I think, with few exceptions, the rule is, the period of gestation may be passed without special damage to the teeth, by means of proper hygienic regulations. Even taking all cases as they run, mismanaged or not, the wholesale destruction so often talked about is not often seen. In the worst examples, their history will show, nine times out of ten, that decay existed before the beginning of pregnancy.

The *real* trouble is not in any inherent or necessary condition belonging to the pregnant state, but rather in certain habits which are apt to prevail.

1st. The pregnant female is usually averse to consulting the dentist for fear her condition may be incompatible with dental operations, or she may not wish to mention her condition; and so from the earlier months of pregnancy to the mid-period of lactation, perhaps from one to two years, her teeth are neglected in this way.

2d. She is usually liable to neglect the care of her own teeth, and in many cases will permit herself to suffer with tooth-ache that might easily be relieved, because she too has been taught—falsely taught—that such things are necessarily to be expected as "an order of nature."

### IODIDE OF POTASSIUM.

Again, Dr. Dwinelle says the result of administration of iodide of potassium is a grooving of the teeth—as regularly "by a file." Is it not true that such administration of the iodide is usually for some disease which may in itself render acrid the secretions of the mouth, and far more likely to produce erosions than the remedy administered?

## CAUSES OF CARIES.

DR. W. G. A. BONWILL, PHILADELPHIA.

Decay of the teeth is caused primarily by the juxtaposition of proximal surfaces, their sides forming, by their contact, capillary tubes This powerful capillary force draws the fine, starchy particles of food and saccharine matter, up and up till they reach that part of the tube nearest the point of contact. This tube is acting on all sides—buccal and lingual and next the cervix—except on the grinding surface, where the teeth occluce. The tube ends where the teeth are in actual contact, and there decay never commences, as the space is already pre-occupied by two points in such close union as to be practically one tooth.

The point of contact is never the first to succumb to the action of decomposed food. Decay progresses toward the cervix, and the grinding proximal surface is the last to give way; and this is mostly from pressure exerted on the wall of undermined enamel, or where the prop of dentine has been removed.

Chemical action by acetous fermentation, due to an excess of starch or sugar in our food, is set up just where the finest portion of the capillary tube reaches, and, as it must remain, there is no chance for interchange of particles by the oral fluids.

In the majority of the present generation, disintegration of enamel commences *immediately* after the teeth are in a fixed position, when the capillary tube is rigidly formed, and it goes on with unremitting energy till complete annihilation of its structure results.

The teeth of civilized people will, almost without exception, yield to this physical condition, so long as the elements of fermentation are placed in the mouth, however much floss silk is used; this only deferring the hour of complete overthrow.

Galvanic action is not necessary as a factor in bringing about this purely chemical result of the action of an acid on lime-salt when in contact with it.

This same law holds good after decay has taken place, and gold, amalgam, tin or any other compatible or incompatible substance has been substituted, if that material is so shaped on its proximal surface as to form a capillary tube, provided dentos makes one wall of the tube, decay will revel just as well and surely.

The law of incompatibility with dentos has nothing to do with this purely physical change, and galvanic action is out of the problem.

If we could save tooth structure it can only be done by immediate action after the teeth are in permanent position, in destroying this capillary force, by giving such shape to the mature organs as to give a chance for the free circulation of the oral fluids.

If we do not act on this principle and save the teeth by true "anticipation," but permit decay to take place on the proximal walls, we should check it by filling with that substance which can best be placed in the cavity to prevent any leakage at all points; and their proximal walls should be cut so as to leave one good shoulder at the buccal grinding surface, with no tooth structure touching at the cervix. —*Odontological Society.*

## LEAVING THE ROOTS IN.

In response to your editorial in last month's issue "Shall we leave the Stumps in?" when preparing the mouth for artificial teeth, as is the custom of many English dentists, I would state that my experience (in England and America), has long ago convinced me that the method generally practiced in this country to extract all roots and even teeth when they are likely to retard the construction of a useful and well-fitting dentine, is far superior to that practiced in England, where the majority of practitioners leave in as many roots as possible.

It is impossible to get a good suction on a plate for a considerable time, when it covers even one root.

The practice of retaining as many roots as possible in the mouth, doubtless accounts for the vast number of metal plates, clasps and spiral-springs, made use of by our English brethren, vulcanite being too weak and bulky when roots are retained. Few can deny the superiority of workmanship the average English dental mechanic exhibits in the construction of a set of teeth *out* of the mouth, but to obtain results as satisfactory, and produce such a fine effect *in* the mouth, as the American dentist can with a piece of rubber, the English dentist will find it necessary to extract the roots, and if he wishes to dispense with spiral-springs, he must, like the American dentist give preference to plaster of Paris, in place of wax or modeling composition for taking impressions of the mouth.

D. TAYLOR, Jersey City, N. J.

## POLISHING RUBBER PLATES.

After the usual filing, scraping, and sand-papering comes, of course, the felt, buff, and pulverized pumice stone; then, instead of a brush wheel and the usual method, I wash and wipe the plate dry, take it in hand with concaved side up, take a camels's hair brush and paint all over with sweet oil, then about a tablespoonful of dry plaster, and with the thumb rub over quickly and briskly, and in a few minutes produce a polish that can't be equalled with the lathe. Polish above the gums in the same way, using the forefinger full length instead of the thumb, wash the plate with soap and water, then use alcohol to remove any remaining grease.

G. H. KELLANBERGER.

## THIRD DENTITION.

Editor ITEMS.—I send you a cast of a third dentition. The lady is 35 years old. Her second teeth were extracted three years ago. I made her a full upper set Oct., 1883, and in June last the third dentition began to make their appearance, of which six have come through which you can see by examining the cast, and the others will be through the gums before long, as they can be felt plainly by rubbing the finger over the gums. Mrs. G. has not had good health for the last six months, she complains of her breast being very sore whenever any one of her teeth starts to come through.

Now, Mr. Editor, I ask you, or any of your readers, Is this not a very rare instance,—a lady of 35 to have a third full set of teeth? The under teeth are coming the same way where the second teeth have been extracted.

I. BOALS, Harrisville, Ohio.

### EDITORIAL REMARKS.

We were in the practice of dentistry for 26 years, and a physician for some years previously, yet we have never seen an instance of third dentition, and we never saw a physician or a dentist who had. We have heard related a few instances where new teeth had come in during old age, but not one where the history was sufficiently known to make it clear that these new teeth were of third dentition.

In the cast you send us there is certainly evidence of six teeth coming through, and we have no doubt of your statement that the lady is 35 years of age, having had all her teeth extracted three years previously.

But does this make it a case of third dentition? We think not. It is more likely an instance of the suppressed growth of part of the permanent teeth. This is not uncommon. We have, in numerous instances extracted deciduous teeth for persons over 25 years of age—the corresponding permanent teeth never having made their appearance. When they did, they were supposed to be a part of a third set; but we knew better. We extracted five baby teeth for a sister when she was forty years of age. These, with some of the permanent teeth, were removed to make place for an artificial set. Where some of these deciduous teeth were, new teeth afterward appeared. We prepared her to expect them, for both of us knew of the character of their predecessors.

Often a dentist extracts a deciduous tooth for a person of mature age, not knowing it to be such; and when there is nothing to oppose the permanent tooth taking its proper place, it will sometimes appear, and sometimes it will not, or at least for many years.

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**Combination of Gold and Tin.**—When the two metals, gold and tin, are used in the same filling, I prefer that they be combined, that is the two foils mixed or twisted together and inserted in this relation to each other. There seems to follow a peculiar union of the metals, something like an amalgamation of them, for when such fillings are removed after being worn for years, we find this union such that he two metals cannot be separated mechanically.—*W. W. Seeport.*

## A FISTULA FROM A BLOW.

### The Regular Physician's Treatment vs. The Dentist's.

DR. WM. H. ATKINSON, NEW YORK.

A girl of fifteen, when eight years old had her inferior centrals dislocated by a stone. The family physician treating with poultices on the chin succeeded in producing suppuration through the under jaw at the symphysis. The child was in the same hands for seven years, when the mother, realizing that her daughter was growing to be a woman and the suppuration continuing, asked to know how much longer the case would be under treatment, receiving for answer that the physician would think it over and inform her. In some three weeks he gave her a letter to a prominent professor of surgery in this city, who told her he would confer with her doctor.

Eventually advice was given to apply to her dentist and have the inferior centrals extracted, both of which were pulpless; and in three weeks after the teeth were out the child was to be taken to the professor for operation.

The mother detailed the advice to her dentist and expressed her wish to follow it as it was from high authority. On examination, the dentist refused to extract the teeth without consultation with a dentist whom he named. This resulted in a letter of introduction which was brought to me on Saturday, October 31st.

The foregoing history was repeated and my advice asked, which was to bring the daughter and her dentist the next morning when an examination would be made. The physician was invited to be present if he would.

November 1st the father brought the child and, with the dentist, the examination was made, the pulp cavities and canals of both teeth were opened quite through their length into a pit in the jaw, bordered by necrosed cancellous and dense bone and connecting with the fistula in the chin. Creosote and oil of cloves, on a fine dressing needle wound with cotton, were pumped through till they oozed from the fistula.

A tent wet with the same drugs was packed into the fistula to enlarge it for the free passage of a bur, with which it was proposed to remove the necrosed bone on the 3d of November.

In the meantime the dentist was to place new tents so as to open well down to the dead bone. The burring was done according to appointment in the presence of the dentist, and cotton dipped in wine of opium was packed into the opening to keep it free till the next day, November 4th, when, after starting fresh blood, a sponge graft was inserted and the case dismissed till November 8th.

On the 11th a portion of the sponge protruding was clipped and

a little serum escaped. On the 14th the sponge was clipped again and it was dressed with bichloride of mercury solution (1 to 500). On the 19th treatment was repeated and again on the 25th, adding elixir vitriol; and on the 29th the bichloride of mercury was repeated, and peroxide of hydrogen used to prove the quality of serum, granulation not coming forward as fast as desired; there was no pus.

To improve blood, sulph. nux vomica, phosphorus and cantharis were prescribed. The case was dressed again on the 2d of December, again on the 6th, 9th and 13th, when continuing to progress very satisfactorily it was dismissed for a week.

## THE TEETH AND THE EYES.

DR. M. L. JACKSON.

Two years ago a gentleman came to my office troubled with a sore eye, five years previously he had the root of the central incisor filled by some process, but it was knocked loose, and troubled him. He went to a dentist in Adrian, who opened it, he claimed, to the end of the root, treated it first and then filled it. Six months afterward this gentleman was taken with severe pain in his right eye; that pain continued, and finally settled into an inflammation. He went to Chicago to have it treated; was there some three months, with some improvement. He came back, and the eye became worse. I examined the tooth above referred to. It was not bad looking; it only showed discoloration; I tapped on it a little, and he immediately flinched. I took the filling out and did everything I could to save the tooth, but finally extracted it, and found it had been filled only one-third to half way up. The end of the root was honey-combed a quarter of an inch. Two days afterward the pain had left his eye, and a month after it was well, though the pain in his eye had been running for five years.—*Iowa State Dental Society.*

**Disease,** a paper by Dr. W. H. Atkinson, is well worth close study by close thinkers. It is Atkinsonianson pure and simple—or rather abstruse and complex—but shows his accustomed originality, and independence of utterance.

**Watch your business,** be always ready to do it, show by your promptness and alacrity your love for it, and your business will soon smilingly hand you your reward.

We are indebted for what we enjoy, to the labor, the life work, the heroism of the human race, and as we have plucked the fruit which others planted, all, in thankfulness, should plant for others yet to be.

## A FEW CORRECTIONS.

In the synopsis of my paper on Pyorrhœa Alveolaris, you announce, to begin with, that it was read before the American Dental *Society*.

Now, permit me to say, it was before the American Dental *Association*. There is no American Dental *Society*, that I know of, or ever heard of. Dunglison spells Pyorrhœa as it is spelled here. *Cinchona* I have never prescribed for this disease, and the dose is unwarrantably exaggerated. Cinchonidia is the alkaloid I mentioned as a tonic, and the dose *two* or *three* per day of two grains each.

The elision of the connection quite conceals the meaning of the last paragraph as printed, which should express that where the sponge graft may not be retained by the relation of the parts, and in consequence a fixture for its reception is indicated that *then* an impression is taken. Further, Peroxide of Hydrogen $H_2 O_2$, I am made to say is the best sterilizer, which I *do* use as a pus detector, and the sterilizer I do recommend is bichloride of mercury, Hy. $Cl_2$, the sterilizer par excellence. If I am to be misrepresented and made to give bad counsel in this fashion, may I ask to see proof of what you wish to print from my speeches or papers, and thus benefit both you and the profession, by having what I *do* say appear so that it may be intelligible and useful.

WM. H. ATKINSON.

### EDITORIAL REMARKS.

This synopsis should have been credited to the Ohio *Journal of Dental Science*. We have new printers this year, and, in this instance, they forgot to credit the magazine from which they took their copy, and we did not notice the omission.

We are sorry if this synopsis is defective, and we gladly give friend Atkinson space to make corrections. The blunder of calling the American Dental Association a Society was ours. We ask pardon.

If spelling pyorrhea without the digraph œ is a blunder, that is also our fault, for we struck the o out, making the spelling pyorrhea. Of this last digression from custom, we do not ask pardon, but offer the following remarks in extenuation:

The omission of the digraph has become the custom of some authors and editors of repute. The first contemporary journal we picked up from our table—*The Cosmos*—had our spelling for this word.

In medival days, many words, even of common parlance, were spelled with these antiquated digraphs, as, æg for egg, æcer for acre, ær for ere, blæc for black, glæm for gleam, wæs for was, wære for were, æquilibrium for equilibrium, formulæ for formulas, hæmorrhoids for hemorrhoids, ætna for etna, ælina for elina, æconomy for economy, manœuvre for maneuver. There is special pains taken by many to retain these awkward diagraphs æ and œ, in professional words, but with quite a respectable class, though they tolerate them in some foreign words, they eliminate them in,

1st. All words that by long and common usage have become anglicized; so that they now write cyclopedia for cyclopædia, homeopathy for homœopathy, allopathy for allœopathy edema for œdema, hemal for hæmal, ether for æther, fetus for fœtus gonorrhea for gonorrhœa, diarrhea or diarrhœa, and even pyorrhea for our friend's pyorrhœa. But specially is it their custom to substitute e for æ and for œ.

2d. When, by anglicized pronunciation, the e in the digraph æ and œ has changed from the long sound to the short. They therefore write anesthetics for anæsthetics, etiology for ætiology, esthesia for æsthesia, esculin for æsculine, esthetic for æsthetic, hemaline for hæmaline, hemorrhage for hæmorrhage, diarrhetic for diarrhœtic.

We are glad to see this tendency to anglicize the spelling of a word when, by common consent and by long usage we anglicize the word. We believe our friend Atkinson, with his advanced ideas, will think so too when he comes to reflect on it. The spelling is bad enough, even then.

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## A SHAMEFUL CASE OF MALPRACTICE.

DR. GEO. H. WEAGANT, CORNWALL, ONT.

About eight months since, a nun, 22 years of age, from the Convent in a neighboring village, came to me with a slight attack of toothache in a lower bicuspid. I found the pulp in the aching tooth partly exposed and slightly inflamed. I made an application of oil of cloves and dismissed her for three days. Some of her other teeth were variably decayed, but none badly, and she was to have them all filled when she returned. There was nothing leading me to suppose I would have the least difficulty in saving any of them. She did not keep her appointment, and the next time I saw her was about six weeks ago, when she appeared with her face swelled out of recognition. She said she had been having a terrible time, and from her description of the case I came to the conclusion she had four or five badly ulcerated teeth. I asked her why she did not return before as I had instructed her, and she said that at that time the roads were so bad it was impossible to get in, and as the teeth were quite comfortable she waited till she went to Montreal, where she had them filled. I then proceeded to examine them. The first thing that struck me as radically wrong, was the appearance of the filling—not fillings—in the inferior second bicuspid and first molar—approximal cavities.

The filling was amalgam, and plastered in and about the two cavities in the most slovenly manner; not the slightest attempt had been made to separate it into two fillings, nor to prevent it from pressing against the gum. Both of these teeth were loose; the jaw and gums badly inflamed, and the face swollen. The lower molar on the opposite side was also the proud possessor of an abscess, and so was a molar on each side above. All of these teeth held medium sized amalgam fillings. To say the least, I was surprised; especially when the patient told me that none of the teeth except the lower bicuspid first mentioned had ever troubled her before they were filled. She wanted me to extract all of these teeth, but I persuaded her to let me try to save some of them. I took a small saw and cut through the mass of amalgam between the bicuspid and molar, when the two portions immediately came out. Under the amalgam I found a whitish colored dirty looking

pasty substance, which I cleared away. Very little of the decayed dentine had been removed. I was astonished to find there had been no exposure of the pulp in the molar, though that organ was undoubtedly dead. I was obliged to drill through an eighth of an inch of sound dentine to reach the pulp chamber. I removed the other fillings, and though the pulps were all dead, there had been no exposure in any of them, except the lower bicuspid first alluded to. Under each of the fillings I found the same pasty, white looking substance which I now firmly believe was arsenic.

Now, I long ago learned the lesson that it was bad policy to say anything to the patient about the poor operations of another dentist, but I could not refrain in this case from asking the name of the operator who, in this enlightened age, had brought about such astounding results. I was very much relieved, as you may well suppose, when she told me the fillings had been put in by one of the nuns of Montreal.

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**Sensitive Dentine.**—Prof. Flagg says, "if, in excavating a cavity the dentine is sensitive, by under-grooving, the tubuli being cut at their base, no sensation can be transmitted to the pulp."

This may be a fine theory, but in practice it is not true in *our* experience. What say others?

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**Listerine.**—I think the antiseptic LISTERINE justly entitled to a prominent place among our remedial agents. I welcome it as accomplishing as much, if not more, than we get from other preparations, combining as it does *safety* with an entire absence of any properties disagreeable to patient or operator.

It does not stain, and has no caustic influence even in full strength; it can be used with freedom in all surgical operations about the mouth, without fear of taxic symptoms when accidentally or intentionally taken internally; in fact, sometimes proving a great advantage in this particular, as it corrects fermentative eructations from the stomach.

Its use, both in private and infirmary practice, convinces me of its admirable adaptability in the treatment of oral lesions, such as pyorrhea alveolaris, ulcerated surfaces, as a dressing to pulp canals after the removal of putrescent pulps, and as a purifying agent in diseases of the antrum.

To cleanse the mouth and throat before operations, LISTERINE is particularly adapted on account of its gently stimulating action; the cooling and refreshiug sensation left on mucous membrane renders it grateful to many patients as a mouth wash; and it is an excellent adjunct in the preservation of the teeth.—*Truman W. Brophy.*

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**Liquid Silex.**—What can I use to thin it? Water.—[Ed. ITEMS.

## DR. CHASE'S PLEA FOR "MORE ROOM."

Dr. H. S. Chase makes an appeal for "*More Room*," addressed to "*students and young practitioners only.*" I wish to say to those same young gentlemen—or ladies, *Don't.* Do not accept the advice given, unless in homeopathic doses. Do not accept the statement that "nineteen persons out of twenty have crowded teeth at the age of twelve, thirteen or fourteen—such a condition as would impede a thread or quill tooth-pick." Reverse the statement, and say, perhaps one in twenty.

Do not accept the statement that "contact even is bad, pressure fatal." On the contrary, contact is good, as a rule, and necessary, at some proximal point in each individual of a well articulated set of teeth.

The doctor's rule is a good one, not for nineteen cases out of twenty, but for one in twenty. DR. ————

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**Replantation.**—In many cases it is my practice to extract dead teeth, smoothly grind the apex of the roots, so often partly absorbed, insert into or fill the canals with wooden plugs saturated with a mixture of carbolic acid and tr. iodine, then replace the teeth and ligate to hold them in position until they become firm. This method, gives good results. Some time ago a lady patient called at my office who had just before received a fall in the street, completely knocking out her two central incisors, which were left where the mishap occurred. I requested her to return immediately to the spot and secure, if possible, the lost organs. In a little time she came back, having been fortunate enough to find them. These were immediately placed in warm water; then the pulp canals were cleansed and filled with carbolized wood, and the teeth forced into their former positions. They again became firm and useful.—*C. N. Pierce.*

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Editor ITEMS.—Please direct Student, who has a bad breath, not from bad teeth to take from a half to one teaspoonful powdered charcoal in water every morning, and his annoyance will cease. It is somewhat difficult to swallow but when taken fills the bill.

G. A. VAWTER.

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EDITOR:—In reply to the inquiry concerning electrical shocks in ITEMS OF INTEREST, my wife used to have a gold filling in proximity to an amalgam mounted crown, and complained of occasional unpleasant shocks. At any time if they were connected with an instrument a shock would be given. D. D. LESTER.

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**Etherization** is made much more rapid by placing the ether bottle in hot water, to which a flexible tube and hood are attached.

## ELECTRICAL FISHES.

DR. J. B. C. WALLIS, ENGLAND.

All animals are electric batteries of variable power. Some human bodies are renotable instances. Probably the most remarkable manifestations of electricity occurring in the animal kingdom is in electrical fishes, which have the power of giving, when touched, shocks resembling those from a Leyden jar. There are several varieties of these fish.

The raid torpedo* or electric ray, of which there are three species inhabiting the Mediterranean and Atlantic, one species is found on the Atlantic coast of America and the other on the California side. The "battery," by which they are able to give very powerful and even dangerous shocks, is quite similar in structure in all the species, and is situated well forward on each side. This organ consists of laminæ, composed of polygonal cells to the number of 800 or 1,000, or more. It is supplied with an exceedingly rich distribution of branches from the trigeminal nerve and the pneumogastric. These are ramified on each cell of the "battery," and give to it its energy. They arise from a special nervous ganglion, called the *electric lobe*, connected with the medulla oblongata behind the cerebellum. Each of the cells is filled with a clear fluid, of which one tenth part is albumen, with traces of common salt. The electric discharge is obtained by touching the upper and under surfaces of the fish. The back or upper surface of the fish is positive and the under surface negative. The energy of the discharge varies with the size and strength of the fish. The shock serves both as a means of offence and of defence, and is purely voluntary. It becomes gradually weaker as it is repeated and as the fish loses its vitality, for the electrical discharge soon exhausts them considerably, and even causes their death. In the silurus, as in the torpedo, the head appears to be the seat of the electricity. In the Surinam eel the electric organ goes the whole length of the body on both sides. This fish attains a length of from five to six feet, and, when full grown, is capabie of giving a terrible shock. Humboldt, when in the Rio Colorado, measured some of these fish that were nearly six feet in length, and he was told by the Indians that there were larger. Humboldt has described the combats which took place between the gymnotus and wild horses driven by the natives into the swamps inhabited by these fish—*Dental Record.*

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* It is a curious point, says Thompson, that the Arabian name for the torpedo, *ra-ad*, signifies *lightning*. This is perhaps not so curious as that the *Electra* of the Homeric legends should possess certain qualities that would tend to suggest that she is a personification of the *lightning*. The resemblance between the names *electra* and *electron* (amber) cannot be accidental.

# For Our Patients.

## DENTAL SHOPPING.

"Dear me! my teeth are all going to destruction, they ought to be attended to at once, but it *costs so much*, I can't afford it."

Reader, you might just as properly say you can't afford to be sick; but, nevertheless, you *are* sick at times, and do employ a good physician, and, of course, pay him.

Your teeth *do* decay; such is the lamentable fact, and they must be attended to, or you will loose them, and you must employ a dentist, and, of course, pay him.

These are facts. The question for you to consider is: "Can I better afford to have my teeth well, or poorly, attended?"

In reading over your newspaper you find a new advertisement, and with beaming eye and quickened pulse, you read over a list of prices just established by some strange dentist who, for some remarkably queer reason, or equally strange facility, advertises that he is enabled thereby to accommodate his friends in particular, and the world in general, with dentistry in all it branches, *beautifully*, *excellently*, and *scientifically* done at the prices named.

And he may have the magnanimity (?) to make some insinuation derogatory to others in his profession, hoping, to make you so distrust them as to lead you to him.

The extraordinary low prices surprise you, but as he boldly advertises in a first-class paper, you quite naturally believe some kind philanthropist has "turned up" just in time for you, and you take an early opportunity to have your long neglected mouth restored to health.

In the first place, perhaps you very generously give your own dentist an opportunity of "bidding" against the advertisement. He tells you he can't give you his best services at such a rate—and he will not give, neither do you wish, any but the best for the prices you name—which are likely to be less than half his usual rates, and you go away thinking "what an extortioner he is," and though he kindly warns you that it is not always good policy to get cheap dentistry, or buy cheap goods, you have made up your mind to "go it blind."

What is your experience? I can tell you. You find when your teeth are filled, you have paid your cheap dentist a bill nearly as large as your own dentist would have charged you, and when you demur and refer the advertiser to his published rates, you find there is a wide range between his highest and lowest prices, and *your* work don't happen to come under the low prices.

Or, if you try to find out the probable cost beforehand, you are surprised at the great variety of prices, particularly when you exercise your "shopping" propensities, and you find he will work for any price rather than let you leave his office.

In our humble opinion, you might well question the reliability of his work, and have good reason for thinking his only motive was to get your money, be it much or little.

Reader, is such a man worthy of your confidence?

A dentist of course has the right to discriminate in his charges, so as to favor his patients who are in humble or trying circumstances, as a physician would; but what would you think of a physician who would advertise a list of disease and prices to cure them, without knowing the attending circumstances, or even the progress of the diseases? You would pronounce him a quack, and shun him, and employ one who had won his way to your confidence and respect.

Reader, you may think it good and sharp practice to go "shopping" in dentistry; you might just as well go round among the surgeons and carpenters to see who would amputate your leg the cheapest; in either case you would find the best operation was the cheapest, though costing more at the time.

You will find that cheap work, whether in filling or inserting teeth, will disappoint you, and that you have spent your money for naught but trouble. Then you are disposed to blame dentists as a class, and, having lost your confidence in them, neglect your mouth and suffer the consequences, and surely the last state is worse than the first; when, had you shown common sense, and procured the services of a known, competent dentist, and paid him for his labor and skill, you would have been infinitely better off, and dentistry would have the benefit of your testimony to its untold value, and, too often, unappreciated benefit of mankind.—*Allport's People's Journal.*

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**Teeth as a Feature.**—The social organization of society out of which grew the rivalries in dress, in manners, and in all personal adornments, did not fail to see how large a measure of attraction was to be found in the varying expression of the mouth, and that in this feature of the face the teeth played the star role in every performance. *That only* is a beautiful mouth, that can display beautiful teeth. Hence society compelled dentistry to add *art* to it, mechanism, which, as applied to dentistry meant the study of the expression of the countenance, and how this is modified by the dental arch, and the arrangement, and every peculiarity of the teeth set in it. This is applicable both to work on the natural teeth and to artificial dentures.—*L. C. Ingersoll.*

## IMPORTANCE OF THE TEETH.

DR. C. P. FITCH, PHILADELPHIA.

The human teeth present two aspects of importance. Expression and Mastication.

The first has reference to one of a group of features, the natural completeness of which renders the countenance agreeable, and when harmonious, in color, form and size, presents a pleasing aspect, but when marred and fragmentary, renders the human face hideous and repulsive.

The second has reference, in a physiological sense, to one of a series of acts which constitute digestion, the normal function of which is essentially necessary to health, and even to life itself.

Without a proper comminution of food, which should be performed by the teeth, we need not expect a continuance of health, even when coupled with a good constitution; and the harmonious maintenance of these physical acts which change solids into fluids, and render them capable of assimilation and nutrition, cannot be secured.

As important as are the teeth, and as necessary as is their preservation, viewed in these two aspects, the subject is but partially comprehended, or, if understood, it is much ignored and disregarded by thousands. A want of cleanliness and attention to these beautiful and highly useful organs, marks the habits of hundreds from the commencement to the close of the year. A trifling expenditure of time and means would preserve them and enhance the comfort and happiness of the individual; but deprived of them, expression, beauty, and health are marred, if not entirely sacrificed. How many are met in every community who bear about the filthy and disgusting relics of a former beautiful dental organism!

Others, again, deem it important only to preserve the front, allowing the molar and bicuspid teeth to decay and crumble away. How very strange this infatuation; as though the maintenance of expression about the inlet of the oral cavity was sufficient. Disastrous physical results are sure to follow the loss of the back teeth.

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**Extracting teeth by the Chinese** is said, by a recent traveler, to be a marvel of dexterity. "These Chinese actually extract with their fingers," says this astute observer. Had he observed these Celestial charlatans more closely he would have seen that they had previously rubbed the teeth with a fine white powder which they claim is the fillings from a tooth of a sea horse, which has the power of loosening the tooth. This powder is arsenic, the application of which, in a few days causes sloughing and consequent looseness of the tooth. Of course, *then*, it can be taken out with the fingers.

**To prevent decay of the teeth** let us live so as to prevent all diseases. With simple diet, free exercise, healthful appetites, and a general normal condition of the body there would be little chance for teeth to decay, except from hereditary viciated tendencies.

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**Delay in having teeth examined** is often fatal to a valuable tooth. We should not wait till *we* know they need attention, but should frequently apply to a competent dentist for their examination. When the decay is slight, it is easily, cheaply, and generally painlessly attended to. A dollar's worth of prevention is better than many dollars worth of cure.

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**Clean, healthy, and beautiful teeth** is one of the brightest features of an attractive countenance. Because they are hidden when the mouth is shut makes them all the more interesting when brought in sight by a laugh, a smile, or even in conversation. And yet how many neglect these useful and ornamental organs.

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**The Eyes and the Teeth.**—Sometimes sore eyes are caused by bad teeth. In fact, we have known many instances of very sore, inflamed and painful eyes to be caused by ulcerating teeth; sometimes by exposed nerves in teeth, specially of the eye teeth. We have known physicians to treat sore eyes for months to no purpose, which a dentist would cure easily by treating the teeth.

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## SHE WANTED A WIND SUCKER.

A country woman called on Dr. N. Schlosser who had, a few days before, inserted a full upper set of teeth without the usual air chamber, and said to the doctor that her teeth were not right. The doctor asked what was wrong with them.

Why, she said her plate had no "wind sucker," that her neighbor, Mrs.———, plate had a wind sucker.

The doctor asked her if she could wear them?

"Yes."

Do you eat with them?

"Yes."

Do they stay firm in your mouth?

"Yes."

Then the doctor explained that her whole plate was a wind sucker, and could suck more wind than it was possible for that little spot in the center of the plate. With this explanation she went away satisfied that her plate was the better "wind sucker" after all.—*Chambersburg Herald.*

## DENTISTS' TOOLS.

HORACE E. POPE, M. D., D. D. S., DETROIT, MICH.

Lines composed when the author was anything but COMPOSED, in the intervals of dental operations, and respectfully dedicated—TO HER Dentist.

What a picture I'd make for an artist, now,
As I sit in this dental chair,
With my nose in the air like a lowing cow,
My mouth wide open—you fancy how—
A terribly tragic frown on my brow,
And very disheveled hair.

My mouth seems one vast carpenter shop
With a finely echoing dome,
Where screw and chisel and plane and mop,
And gimlet and file, and—where shall I stop?
All things that can saw, and bore, and chop,
Are making themselves at home.

First of all comes the pickaxe, and then the drill;
Dear me, what a terrible bore!
'Twill pierce thro' my head, I'm sure it will;
'Tis a "case of assault with intent to kill;"
No! another instant I can't sit still;
Pray don't use that any more.

Thank Heaven! at last that's laid aside;
But alas! I am learning the way
Of being resigned where ills betide,
Lest into greater ills yet we may glide,
For that awful condenser will now be tried—
A high pressure one I should say.

Now, last of all, comes that hateful file;
What an awful noise it makes!
I'm certain it might be heard a mile;
'Tis the very vilest of the vile,
It rumbles in such a horrible style
That the fretted roof fairly shakes.

Oh! I've sprung from my seat with a gladsome brow
When my school-day's tasks were o'er,
When I rose with glee for the parting bow
Of some everlasting bore;
But with half the joy that I jump up now,
I never jumped up before.

—*Dental Jairus.*

# Editorial.

## OFFENSIVE PERSONAL ODORS.

Odors from the body are unavoidable,—they are inherent—a characteristic of the physical organization, and a consequence of its activities. There are not only general personal odors, but each of us has a special individual odor which marks our identity. The familiar example of the dog being able to select his master's footsteps from those of all other persons, and to follow them to his master's presence, is a striking proof. And how often is a criminal thus traced by first simply allowing the dog to smell of an article of clothing previously worn by him.

The odor which is peculiar to an individual may be pleasant or unpleasant. In depicting his beloved in the Songs of Solomon, that great man gives special prominence to the pleasant aroma of her person. Such an attraction is a great blessing; and in one we love an exceedingly agreeable feature.

The breath and the insensible perspiration may be made aromatic by eating specially aromatic food. Some grapes are so highly scented that their aroma becomes a pleasing exhalation from the lungs and the skin for some time after they are eaten; as it is with many fruits, gums and spices. Our renowned and esthetic dentist, Henry S. Chase, says that after eating strawberries he can taste them on the skin of his arm.

But when the personal odor is unpleasant, it is a great misfortune; if preventable it is an inexcusable disgrace. Offensive odors are produced by various causes, and it is fortunate that nearly all may be prevented or overcome. Among the most immediate and prolific causes are improper food, and the results of indigestion. We do not say onions, cabbage, turnips, aud other offensively odorous things should never be eaten, but we do say, if we eat them, we should, for a time, measureably isolate ourselves from good society. There are other foods which, though they do not cause disagreeable odors immediately, they do mediately, while they are being digested.

Eating more than the stomach can properly digest is another cause. Instead of being quickly and thoroughly assimilated, a part remains in the stomach long enough to decay, and, of course, it produces fetor. Let those who doubt this take an emetic two or three days after gorging at a fashionable feast, that has brought on them fever or other symptom of indigestion, and witness the foul smell of what is thrown up.

How quickly will a feverish condition produce fetor of the skin and of the breath. This is not necessarily a diseased action. Fever

at the worst is but a symptom of disease, and it is generally nature's effort of overcoming a diseased condition—a clogging of the circulation, or of some tissue. By the fever, thick blood becomes thinned, sluggish blood becomes quickened, foreign and effete matter is carried off as by a flood, and thus obstructions and impurities are removed. Help nature at such times, to open the pores of the skin, by causing copious perspiration, and when this has subsided, by thorough washing with soaped water and ammonia. Don't be afraid of drinking large quantities—pints or pints—of cold or warm water during fever, even to free vomiting, and see that there are free discharges from the kidneys and bowels. If possible, supplement all by vigorous activity: bring into action all the muscles of the body, breath long, strong breaths, and meantime drink full tumblers of cold water frequently. I think you will be astonished to see how old rheumatics, and gout, and neuralgia, and "liver complaint," and diabetes, and Bright's disease, and even consumption are relieved, if not cured by such a process,—and how every thing is sweetened, and how the breath and the skin are made wholesome and actually aromatic. Sometimes, without fever or special disease, copious perspiration will throw off what has clogged the surface, and bring to the surface what has vitiated the circulation, which is very offensive to the olfactories. Of course, this should be encouraged. Few things will purify the skin quicker and more thoroughly than two or three hydropathic packs, poulticing the whole body by wrapping it in a wet sheet, with sufficient close coverings to produce copious perspiration—and drinking as much cold water as is possible after the body is wrapped. Sometimes the water from which the sheet is wrung is better hot than cold, and sometimes the flannels next to this wet sheet should first be warmed, and sometimes, to bring on perspiration, bottles of hot water must be applied to the feet and back. Following these packs with thorough washing and scrubbing will soon rid the system of what produces fetor of the skin.

The injurious retention of the feces is also an offense. A person having the first idea of cleanliness, if not health, will have stated times for relief, and that at proper times, and at not too great intervals.

The improper retention of the urine also causes an offensive odor, and often forces uric acid throughout the body.

The exhalations from the lungs are frequently foul, either as scent from blood sent there for purification, or from the bad condition of their own substance. These causes cannot always be remedied. They are symptoms of disease which can only be cured by overcoming the disorder. But often a day of fasting will be beneficial, to the breath and to the purification of the whole system. The activity thus produced in the organs will consume effete matter which has engorged

them and the blood vessels, and both will be purer for it. Some think it a calamity to be hungry and are extremely impatient to overcome the sensation. But it is really a blessing, and a greater blessing if we can feel it three times a day. If we do not have this stimulating and healthy appetizer and indicator of good assimilation, better coax it by going without two or three meals, and, after this, eat much less than we have been accustomed to. Most of us eat too much food that is too rich and concentrated. Horses kept on corn would die, they must also have the less nutritious corn stocks, or hay. Many diseases which pour forth foul odors may be cured by judicious abstinence, and in the meantime drinking freely of pure water.

The exudations from the skin is a prolific source of foul odor. I was once called as physician to see a young lady "who was mortifying from a chronic disease." But her "mortification" proved to be a foul skin. For three months she had laid in bed without a washing. Even her hands and face had only been rubbed with a moist towel. Her room was 7 by 9 feet, with every avenue of pure air closed. A thorough scrubbing and a few hydropathic packs that acted like universal poultices to dissolve and bring away the effete matter which clogged the pores of the skin and laid on its surface, soon overcame the "mortification," and transformed a disgusting carcass that scented the whole house, into a perfumed sweet rose that I could not resist kissing.

Even with a comparatively healthy person too much clothing will weaken the activities of the skin and cause an accumulation of decaying matter which will throw off an offensive odor. Instead of the skin being a tough, elastic, closely knit, active protection to the warmth, and to the circulation of the body, it becomes by overclothing enfeebled, and flabby, and relaxed in its tenacity till it is filled with death. Frequent washings of the whole body, and rubbing vigorougly with a coarse towel will do wonders to produce a sweetly perfumed skin and improved health; and by thus toughening the skin less clothing is necessary.

Sweating of the feet sometimes gives a most offensive smell. Nothing but frequent and thorough washing and rubbing will remove it. We don't go barefoot enough; or, at least, with our feet lightly dressed. Most of us keep our feet as closely and heavily dressed in the house as out of doors, and wear on them little less in summer than in winter. It is better to wear light stockings and shoes indoors, and have ready at hand loose felt-lined overshoes for cold out-door travel. And don't be afraid of running about for a time barefeet before going to bed. It will toughen them and cause such an increased and healthy circulation in them that they will be more comfortable with less clothing during the day, and fetor will be unknown.

There are people not cleanly enough to keep their nose clean. This is not so easy with some, and yet it should be done, though it takes much time and trouble. Many persons who, judging from their exceedingly offensive breath, are supposed to be in the last stages of consumption, are only afflicted with a foul Schneiderian membrane; and many who have incurable catarrh, brought it on by neglecting the first principles of cleanliness. Sometimes the nose needs as much and as frequent washings as the face. Generally water is sufficient; occasionally a little phenol sodique is an improvement to neutralize odor, and check materation on the membrane.

How often bad teeth, or a foul mouth have to bear the reproach of all these foul odors! They are sometimes to blame for a bad breath, but not nearly so frequently as is charged. Still, in seeking to obliterate all offences, the teeth and their surroundings should not be neglected. There is no excuse for decayed teeth, sloughing gums, and decomposed food in the mouth. Let us in all these things keep in mind that cleanliness is next to godliness.

Many chronic diseases produce some unpleasant odor. Some physicians think they can tell the organ diseased by the peculiar odor emitted by their patient.

We presume we have hardly a reader who does not wonder why we do not enumerate the use of tobacco as a cause of foul odor. But where it is used its evil is so self evident we do not think it necessary to say one word about it. It is so specially offensive in a dentist we need not hint at its repulsiveness. Every dentist who thus drives off to other dentists some of his best patients, ought not to be told of his folly. Let him suffer the deserved penalty. We will not as much as whisper it to him.

There is one thing singular about this subject: there are few of us who are able to discern a bad odor if it comes from ourselves, even though it is exceedingly offensive. We must depend on the frankness of our friends.

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**Upper central below.** Dr. W. E. Buckman shows us the model of the lower jaw of a young lady in which is a well formed, broad, upper, central tooth—certainly a freak of nature.

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**Soap your rubber dam** when the teeth to be isolated by it are very close. This will cause the dam to slip between the teeth where there is really no space. A very little is sufficient, and better if slightly wet.

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Dr. Thompson, of Virginia, finds that burning the holes in his rubber dam makes them less liable to tear.

**For sensitive teeth,** chloride of zinc is often used with good effect. It is used in crystals or allowed to deliquesce. In the latter state, kept in a glass stoppered bottle, it is best. It should not be diluted. Sometime since we recommended the carbonate of potassium for this purpose. We find it is used with advantage by many. Dr. Flagg recommends that it be mixed with glycerine—about five grains to a drachm of glycerine, and allow to stand till it becomes clear. We have recently laid much stress on Robinson's obtunder, which may be obtained at the depots.

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**The Symptoms of Inflammation.**—Pain is spoken of as a symptom of inflammation. It often accompanies it, but is frequently absent. Swelling, too, is made one of its essential signs, but in inflammation of bone and of teeth there is no swelling. Heat is made a prime symptom, but there is often no heat, specially when inflammation becomes chronic. And so we may say of redness, which is almost always made the first sign. An inflamed surface is often dark, bluish, and sometimes pale instead of red, according to the character of the inflammation, and of the substance inflamed.

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**The term "constitutional"** is often used wrongly. A constitutional disturbance is not one caused by "measles, eruptions, fevers, murcury, syphilis," &c., as assumed by a correspondent of a contemporary journal. No acquired diseased action or condition, unless generated from within, is constitutional. Constitution, as applied to the body, is "the general habit, temperament or conformation of the body. A sound constitution may be defined as the harmonious development and maintenance of all the organs and tissues of the body." Therefore, "the term constitutional," says Thomas, "is applied to diseases generated from within, in the course of the wear and tear, nutrition and waste, of the body, in consequence of inherent or acquired defect."

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**Ulterior.**—The publishers of a contemporary dental journal says in their prospectus: "This journal is published by an association of professional men who have no ulterior objects other than to afford to the profession an independent, outspoken jourual."

It is not usual for a journal to be occupied principally by ulterior —outside, remote—objects. Other dental journals make "ulterior objects" quite secondary,—subordinate to their immediate, more important, central purpose. And again, if these men make the publication of an independent, outspoken journal the "ulterior objects," what can be their main, innermost purpose?

**The temperature of our offices** should be carefully watched. Seventy degrees above zero is a good temperature—rather high than low. But this warmth should not be maintained at the expense of fresh air. Good ventilation must be constant, and after office hours instead of closing the office to all ventilation, give it plenty of fresh air till the morning hour for business.

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**Large operating rooms** should be the fashion, and they should be cheerful, attractive and genial in their furnishings. As the living room in the house should be the best room in the house, best in ventilation, comfort, and all its appointments, so the chair-room should be the best in the "suit of rooms" comprising the dental office.

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**The tobacco habit** is so hard to hide, and at best so offensive to our more delicate patients, who are generally our best patients, that it does seem as though dentists would see it to their interest to desist, though it be coveted as a luxury. We were forcibly reminded of this once by a lady entering our office with the blunt question, "Do you use tobacco?" When we replied, no, she said, "Thank God; Dr. —— commenced my work, but I could hot endure his tobacco breath; I went to Dr. ——, and he was no better; then I was determined to hunt till I found a dentist who did not use this filthy weed." Many patients do not speak out their aversion to such a habit in a dentist, but keep up a terrible thinking, and silently give their preferences to one free from this habit. We thought for the curiosity of the thing we would keep an account for one year of how much work we could trace directly to this one lady. It went up into the hundreds of dollars. We think others will find themselves equally benefited by pleasing their patients in the same way, though they may feel it sacrificing a luxury to do it.

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**The Richmond process of killing a pulp** of a tooth is generally preferable to arsenic. We described this some time since. At first thought it looks cruel, but is generally comparatively painless. It is generally employed where the nerve has been just previously exposed by excising a tooth. The means is simply driving a small piece of soft wood into the nerve cavity. A single blow will do it, and the nerve will generally be forced out at the same time. A repetition is seldom necessary, and abscess or other trouble seldom follow.

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**To Make Gold Foil Soft.**—Some time since we called attention of those who prefer very soft non-cohesive gold to the fact that any gold foil may be made such by placing it in a drawer in which is a little ammonia.

**Caries, and the General Condition of the Body.**—It is well to lay stress on the condition of the mouth, but the cause of caries must also be referred to the general depression and disorder of the body. Why do not the teeth of lower animals decay? and why is it rare among wild tribes of men? We think it is because the general health is better. It is humiliating to acknowledge that civilization increases disorders of mind and body, and therefore increases crime and disease, but if it does not bring these they are concomitants of it. There is not as much of either among the wild tribes of the West in proportion to their number as in our great cities of boasting civilization. And if we look for decay among the teeth in these cities, it is doubtful if you see more among the lower than the upper classes. There are conditions of filth among the former which are fruitful causes of tooth-decay, but among the latter there is prevalent a physical debility, an enervation, a want of physical tone, with habits of luxury and social excesses, which are prolific sources of caries.

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**The Cause of Earthquakes and Volcanoes.**—May it not be the accumulation of gases in the earth? Strange that we had not found petroleum long ago, and yet we now not only find this fluid, but lately, its gases in many locations, in such abundance as to supply large districts with apparently an inexhaustible supply of light and heat. We speak of this product in the plural perhaps simply because it is in different stages of refinement, as is our petroleum. Why is it we did not find this gas when we found petroleum? for, in nature one is the other, and are now found as close neighbors. Perhaps the only answer is the asking of another question. Why was not petroleum found when we first found coal? for, in nature one is the other. The fact is, this is the gradual way nature has developed itself to us from time immemorial. Our light was first oil from the olive, then fat from the beasts, then oil from the whale, then turpentine from the pine mixed with alcohol, then kerosene, then gas artificially extracted from coal in our muffled furnances, and now we use this same gas already manufactured for us in the bowels of the earth. Now the question is: If we can utilize this gas as it accumulates in the earth, or rather use its pressing superabundance—shall we not prevent earthquakes and volcanoes? Has not this pentup gas been made for *us*, and been thrown off in these mighty upheavals of nature and burned in the eternal fires of volcanoes because we have not used it? There are undoubtedly lakes of the petroleum and vast atmospheres of its gas beneath us, only waiting our call to be utilized.

**Pure air and plenty of it** is essential to vigorous circulation and good health. We were once listening to the Rev. Mr. Burchard, when in the midst of his discourse, he cried out: "Air! more air! such a stifling, noxious atmosphere as this is enough to kill us; give us more air, Mr. Sexton?" Dr. Abernathy once said to a class of students: "Fumigations, gentlemen, are of essential importance. They create such a stink they compel the people to open their windows and admit fresh air." We know a doctor who has become rich giving "oxygenated air" to his patients, but he is very careful to teach them "to take full breaths;" "to inflate the lungs fully and frequently," "and to take vigorous exercise in the open air after each inhalation of his 'oxygen.'" His instructions are good, even without his "oxygenated air," and his "oxygenated water." If invalids who lounge at luxuriant resorts by the sea, were to hie to the mountains, climb their rugged peaks and breathe the purer air of their summits, we should hear less of "malaria" and the thousand ills brought on by laziness, luxury, and indoor confinement. And if we, as dentists, opened our office windows more, expanded our chest and lungs to receive more, and danced in the sunlight and strong breezes more, we should be healthier.

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**What an Array of Talent.**—One of our contemporaries has ten editors; another has twelve; and a third, determined not to be outdone, has three editors-in-chief, ten associate editors, and nineteen corresponding editors! No wonder the latter comes down on the table of the dentist three dollars strong. Let us hope that with all this literary talent it will be worthy to be laid away permanently in the archives of dentistry.

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**Tartar and Caries.**—A writer in a contemporary journal says: "It is evident that rapid decay takes place on a surface protected from wear by deposit of tartar." Just the contrary. It is seldom we find caries under tartar; it is one of the best protectors against decay. Even where caries has taken place, if it is subsequently covered by a deposit of tartar, decay will seldom progress.

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**What is Cosmoline?**—Cosmoline, odensoline, and vasoline are the same under different names. It is a jelly or butter-like preparation from petroleum.

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**A diploma to practice.** We said in January ITEMS that New Jersey was the only State requiring a college diploma to practice dentistry. Dr. Caulk shows us that Missouri does also, and Dr. Shirley of Kansas reminds us that his State also requires a college diploma.

**Aping the Foreign.**—There is scarcely a month that some writer in some of our journals does not seek to clothe common things with high sounding—or rather with vaguely, mysteriously sounding—words, even if they have to invent them. Here is a term for caries we are asked to adopt that we may appear more professional: *Caries* is too plain, common, vulgar. We should say "prosphorènéss."

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**The Progress of Dentistry** during the last twenty-five years has been most remarkable. Dentists can now do what would have been almost a *miracle* when present dentists were children. And yet we meet many who know nothing of this art, and yet assume to judge what should be done with their teeth, or to condemm them altogether, refusing to spend any money on their preservation "because they *know* they can't be saved." The opinion of the dentist who is giving his whole life to the subject passes for nothing.

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**Cannabis indica,** which can be found with most druggists, is in favor with many dentists for sensitive dentine. A tincture of the leaves is made, say an ounce to four ounces of alcohol. Moisten cotton with it and introduce into the cavity, or paint a sensitive surface with it and protect from moisture for a few minutes; two or three will sometimes suffice.

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**"Quid pro quo."** A dentist in a discussion at one of our societies said, one of his patients could not give him a "quid pro quo," and therefore he would not serve him. What a pity that patient was so destitute. Some keep it constantly by them. Prof. Flagg says, in his *Quiz Questions*, it is a good dentifrice, and some learned doctors say it is an excellent stimulant. Is it not probable this dentist wanted it for both purposes while he was serving his patient? The patient ought to have been more thoughtful and had it with him. That is, we are presuming, "pro" means *for*, and "quo" *an equivalant.* We all know what a "quid" is. So we think the dentist was reasonable in his demand. All he wanted was a quid for his dental services. Who would work cheaper than that? That is if you like the quid.

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**Portrait of Dr. Barrett.**—As we have read of one and another of the leading men of our profession, we have often thought we should like to see them, and the next best thing is to see their portrait. We have just received one of Dr. W. C. Barrett, which seems almost to bring us into his presence. Thank you, doctor. It is one of the most acceptable New Year's presents we have received. Providence permitting, we will try to return the compliment next New Year's day.

## JANUARY ITEMS.

My Dear ITEMS:—No. 1 for 1886 has come, and if it is an earnest of what is to follow, no one can do without it. I open by chance at page 37, "Dentistry for Infants." This is good. I charge my young mothers to wipe out the mouths of their infants before they have any teeth with a linen cloth, wet with water or dry, and as soon as a tooth comes, to keep it clean by friction, and the child will be careful to do it when old enough, as a result of the early habit. A little time and care will save money, teeth and health.

On page 34, Dr. Storie's article on "Extravagances in Social Life," is excellent. I think one of the worst effects of *tight dressing* of any part of the body is found in the *costive condition* of the skin, producing an inverted action and defecation by way of the mouth, and decay of teeth, or lungs, or by way of kidney or liver, in either case producing disease of the organ that acts vicariously.

GEO. F. WATERS.

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**Though you offend a patient** by refusing to extract a tooth you think you can save, and though he goes to a rival for its extraction, you will be likely, by this very persistency to save teeth, to bring him to you when he wants teeth filled.

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**"Food Habit,"** page 54, by Prof. Pierce, should have been credited to the *Cosmos*.

**Cocaine**, page 59, is by Dr. E. H. Raymond.

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## NOTICES.

**Temperance Teachings for Schools.**—We have received quite a list of school books from the W. C. T. U. calculated to instruct children in the physiological and pathological effects of alcohol—or rather its poisonous effects under all circumstances. No doubt this is a wise movement, and all temperance men and women should further its aims by all means in their power.

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**The Genesis and Conservation of Volcanic Energy,** by Prof. J. W. Pike, Vineland, N. J., is a pamphlet which shows much thought and research.

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**Caulk's Dental Annual** is quite a compilation of statistics. L. D. Caulk, Camden, Del. Price, 25 cents.

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**The California Dental College,** connected with the State University, makes good showing for a young school. At the last session they had 37 matriculates and 13 graduates.

**Dental Bibliography:** A Standard Reference List of Books on Dentistry published throughout the world from 1536 to 1885. Arranged chronologically, and supplemented with a complete Cross-Reference to Authors. Compiled by C. GEO. CROWLEY. 180 pages. Philadelphia: The S. S. White Dental Manufacturing Co., 1885. Price, cloth, $2.00.

We have in this volume the outcome of a long and laborious effort to present a complete list of distinctive works on dental subjects which have been published throughout the world from the earliest times. It catalogs 2047 titles, printed in the various languages in which the books appeared, and chronologically arranged. The work is divided into five departments or sections. Section I contains books published in Germany, Austria, Holland, Norway, Sweden, Denmark, and Switzerland (German); Section II, books published in France, Belgium, and Switzerland (French); Section III, books published in Spain and Italy; Section IV, books published in Great Britain and Ireland; Section V, books published in America. An author's index appended in alphabetical order gives cross-reference to all the volumes cataloged.

No attempt to compile and publish a complete dental bibliography has heretofore been made, and this volume is the only work of its kind in existence. One who has never engaged in such an effort can form an adequate idea of the amount of labor involved in the production of a bibliography of this character. The work must prove invaluable to those engaged in the formation of dental libraries, and those desiring to study the literature of any dental subject. The thanks of the dental profession are certainly due to the publisher, to whom it must have been evident in advance that the enterprise would result in pecuniary loss, but who nevertheless spared no expense necessary to the production of a volume of which every dentist may justly feel proud. A copy of this book should be in the library of every member of the profession who aspires to a familiarity with the literature of his specialty.—J. H. S.

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**Health and Home,** Toledo, O.—"Our purpose," says the editor, "is to do good—to promote, as our motto says, mental, moral and physical health. We shall labor honestly to do all we can along this line, but shall endeavor especially to disseminate right teaching on the subject of physical health from a dental standpoint. We believe there is need of such a work, and *Health and Home* has entered that field, hitherto uncultivated outside of professional journals. We shall aim to give the best thoughts of the best men in the profession, and to so conduct it that all fair-minded men can endorse it."

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**Vick's Floral Guide** is always welcome. What better journal for popular reading could a dentist put on his center table? Send for a sample and see. James Vick, Rochester, N. Y.

**G. F. Waters' Flesh-Brush** is quite a novelty. This is another practical display of a dentist's genius. It is difficult to describe it and its manner of use without occupying too much space. Write to the doctor, 8 Beacon street, Boston.

**Short Hand.**—Are there not many dentists who would like to learn short hand? By addressing D. P. Lindsay, 814 North Forty-fifth street, Philadelphia, they would find a man who could teach them by correspondence. His style is simple, clear and easily learned. It is used very extensively and gives great satisfaction. At any rate it will cost you little to drop him a line for details of explanation.

**A series of questions for the Dental Student,** by F. J. S. Gorgas, M.D., D.D.S., of the University of Maryland, covers the whole course of studies in that institution. It must be of service to those attending the college. It shows great thoroughness and research, and a student able to answer all these questions must be pretty well versed in his various studies.

**The Transactions of the Iowa Dental Society** is an interesting annual of nearly 200 pages. How these Western people grow! excuse us; these old settled States are no longer the West. Thirty years ago, when we went to Minnesota to find the West, they told us the West was still farther. Well, we shall be pleased to study thoroughly this document and give our readers the benefit of our research.

**Scientific Adaption of Artificial Teeth,** by C. H. Land, is a little volume of many original and practical ideas. Published by Dr. C. H. Land, Detroit, Mich.

Ed. ITEMS:—A copy of a small work published by C. H. Land, of Detroit, has just came into my hands, and to my surprise I find that nearly one half reprinted from my "Practical Hints for the Laboratory and Operating Room," first published in 1873. I would suggest to Dr. Land that in the event of the dental profession requiring another edition of his compilation, he should add to the tittle "And Appropriation of Another Writer's Book, by C. H. Land." To say nothing of the morality of this kind of thing, one would think that common politeness would have suggested the propriety of acknowledging his indebtedness to another in so large a proportion of his matter, but as my little book is pretty well known both in England and America, I am inclined to think that this proceeding on the part of Dr. Land, will not add to his reputation. THOMAS FLETCHER, F. C. S.

## OBITUARY.

**Sanford C. Barnum, D. D. S.,** died December 24th, 1885, at Monticello, Sullivan Co., New York, in the 47th year of his age. His sickness was of many months, and his sufferings were very great; Dr. Barnum was a student in the office of Dr. J. W. Clowes, from 1858 till 1862, when he went into practice for himself. He returned to Dr. Clowes, as professionial assistant in June, 1864, at which time he made known the discovery of Rubber dam for keeping teeth dry while filling, and gave it at once to the profession. Honors and substantial expressions of gratitude were showered on him by a delighted profession, and for thirteen years his name has been synonymous with generosity and blessing. There came "a frost, a killing frost" that converted the benefactor into a martyr. A claim *ill advised* and *untimely* was set up by another for priority of discovery, and as it found him with impaired health from a large and exhausting practice he could not resist its baleful effects. Dr. Barnum, was a graduate of the New York Dental College, and his life was fruitful in benefits to his profession and those whom he diligently served. J. W. Clowes.

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Savannah, Ga., Jan. 7, 1886.

**A. H. Best, M. D., L. D. S.,** died on the morning of December 27th, at half past nine o'clock, after six years suffering.

Such is is the simple announcement of the death of a good and useful man.

All who have read the dental journals have heard of Dr. A. H. Best. His short, crisp, practical articles, enviable but just prominence in published dental discussions wherever he was present, and his various efforts to advance the skill, dignity and importance of the profession is proverbial. His salutatory for the new year to us was a characteristic exhibition of his warm heart, his genial nature, and his appreciation of our work in the same direction.

Young man; emulate such an example, that you, too, may be an honor to the profession, and be held in honor by all good men. Why whiffle away your time and die forgotten because you have left the world no better for having lived in it?

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**The death of Dr. John M. Riggs,** marks an era in the history of dentistry. He was the first to use nitrous oxide gas in the extraction of teeth. This was in 1844. Some years after this he described so definitely and intelligently, and became so successful in the cure of pyorrhea alveolaris, by mechanical means, that it has become quite generally known as "Riggs' Disease." He died November 11, 1885, at the ripe old age of 76. He was a strong man, positive, aggressive, and yet, conscientious. He had only one fault, he was a bachelor.

# Miscellaneous.

## ALLOYS.

| ALLOYS. | Zinc | Tin. | Copper. | Antimony | Lead | Bismuth. |
|---|---|---|---|---|---|---|
| Babitt metal | .... | 10 | 1 | 1 | .... | ..... |
| Bell metal | .... | 5 | 16 | ..... | .... | ..... |
| Brass engine bearings | ¼ | 13 | 112 | ..... | .... | ..... |
| " (tough) for engine works | 15 | 15 | 100 | ..... | .... | ..... |
| " " for heavy bearings | 5 | 25 | 160 | .... | .... | ..... |
| " yellow for turning | 1 | .... | 2 | ..... | .... | ..... |
| " for locomotive bearings | 1 | 7 | 64 | .. .. | .... | ..... |
| " for straps and glands | 1 | 16 | 130 | ..... | .... | . ... |
| Flanges to stand brazing | 1 | .... | 32 | ..... | 1 | ..... |
| Metal to expand in cooling | .... | .... | .... | 2 | 9 | 1 |
| Muntz's sheating | 40 | .... | 60 | ..... | .... | ..... |
| Pewter | .... | 100 | .... | 17 | .... | ..... |
| Spelter | 1 | .... | 1 | ..... | .... | ..... |
| Statuary bronze | 5 | 2 | 90 | ..... | 2 | ..... |
| SOLDERS. | | | | | | |
| For lead | .... | 1 | .... | ..... | 1½ | ..... |
| " tin | .... | 1 | .... | .. . | 2 | ..... |
| " pewter | .... | 2 | ... | ..... | 1 | ..... |
| " brazing (soft) | 3 | 1 | 4 | ..... | .... | ..... |
| " " " | .... | 2 | .... | 1 | .... | ..... |
| " " (hard) | 1 | .... | 1 | ..... | .... | ..... |
| " " (hardest) | 1 | .... | 3 | ..... | .... | ..... |

**French Government on Tobacco.**—We are not in favor of sending young men abroad, either to get or to "finish their education," unless their habits are good and their principles are of the best sort. But we would like to import and introduce into our schools and colleges the late French anti-tobacco regulations named in the following: "The use of tobacco is to be absolutely prohibited in all the Government schools in France, on the ground that it affects injuriously the ability to study. The regulation is based on the recommendation of a commission of men of science, and meets with general approval."

Messrs. Woodhouse & Rawson exhibited at a recent conversazione at Guy's Hospital, London, some recent electrical appliances of considerable value. Small glow lamps adapted for illuminating the interior of the human body, various forms of laryngoscopes and dental and throat lamps were shown in action, the current being obtained from a special form of Leclanche battery.

An inch of rain is estimated as equal to 100 tons weight of water to the acre.

**Borax as an Internal Disinfectant.**—In the *Union Medicale*, Dr. Cyon confirms the statement, made by Dumas in 1878, that borax is possessed of most valuable antiseptic powers. Independently of its value for the preservation of food, it is a great preventive of infectious diseases, and may be employed internally to ward off epidemics. It may be taken for months or years with impunity, and constitutes a valuable prophylactic. Dr. Cyon states that it is a remarkable fact that in all epidemics of cholera the workmen in boracic acid factories have always escaped the disease. The usual dose is five or six grammes (75 to 90 grains) daily, taken for an indefinite time.

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**Zinc to prevent rust.** It is said a Zinc ferrule on a steel instrument will prevent rust; also that if a small hole in some part of the instrument is filled with Zinc it will prevent rust. Even jack screws worn in the mouth where steel usually rusts rapidly will remain clean if covered with a filling of, or even connected with a piece, of Zinc.

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**A Preparation to Clean Silver—Liquid or Paste.**—Mix 8 ounces prepared chalk, 2 ounces turpentine, 1 ounce alcohol, 4 drams spirits of camphor, and 2 drams liquor of ammonia. Apply this mixture to the article with a sponge, and allow to dry before polishing.

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**To Preserve Eggs.**—Perhaps one of the simplest and easiest ways is to pack them in oats; a layer of oats and then a layer of eggs, end up. They should not touch each other. Place the filled box in a cool cellar and turn it over two or three times a week.

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A well constructed ice boat, on good ice, will sail much faster than the wind. Probably a wind velocity at rate of thirty miles per hour would give the boat a speed of two miles per minute, the boat and ice being in best condition.

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**Iron burns to a blaze** if reduced to fine shavings or fillings and held loosely together. Gather a few on a magnet and hold a common spirit lamp lighted under them, and see how quickly they will catch on fire.

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Watches were formerly made with 14,400 beats to the hour, or four to the second. The English standard now is 16,400 beats to the hour, while the American standard is 18,000, or five to the second.

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A strip of tarred paper, such as roofers use, placed under the edge of a carpet is a sure preventive of moths.

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**German silver** is simply brass to which has been added from one-sixth to one-third of nickel.

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In Burns, an application of essence of peppermint will cause the pain to cease at once. Soda is also good.